MCU Series Version 2.1(1.7)
Release Notes

Introduction

The Codian MCU 4200 Series, MCU4500 Series and Media Blade 2.1(1) is a new feature release with new features and functionality. This document lists the new features supported in this release and covers the MCU 4200 Series (4203, 4205, 4210, 4215, 4220), MCU 8420 Media blade and the High Definition MCU 4500 Series (4505, 4510, 4515 and 4520).

The Codian MCU series version 2.1(1.7) is a maintenance release that fixes a number of issues. If you experience any difficulties or unexpected results when using version 2.1(1.7) of the MCU 4200 Series, MCU 8420 Media blade or the MCU 4500 Series, please consult the online help documentation for information on using the device, and also the FAQs on the Codian web site before contacting Codian technical support.

New Features and Functionality in 2.1

The 2.1(1) release contains the following additional functionality:

- Media port usage on MCU 4500 Series and MCU 4203
- Codian ClearVision™ option, making the best use of the MCU 4500 Series High Definition capabilities
- Automatically making the content channel important
- Floor control
- Configuring an endpoint's border setting prior to connection
- Confirming individual participant disconnections
- Auto attendant DTMF navigation
- "Next" and "prev" links on conference and participant web pages
- Indication of endpoints being muted remotely
- Gatekeeper Ethernet port association moved
- New serial port command for resetting the passwords
- Gatekeeper neighboring
- H.323 Gatekeeper RAI (Resource Availability Indications)

Media port usage on the MCU 4500 Series and the MCU 4203

Up to now MCU 4500 Series devices have had a single pool of High Definition (HD) video ports and likewise MCU 4203 devices have had a pool of standard video ports. In Release 2.1 neither the conference content video channel (H.239) or streaming take a video port from those available.

The new *Streaming and content ports in use* field in the **Status > Conferences** page shows the usage of the new ports.

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Codian ClearVision™ option on the MCU 4500 Series

There is a new option called *ClearVision* on the **Settings > Conferences** page of the MCU 4500 Series. When enabled, the MCU 4500 Series will enhance video streams from endpoints sending low resolution streams in order to make best use of its HD video capabilities.

Conference participants whose video is enhanced will have their original and enhanced video resolution shown in the conference participants page and in the video section of the individual participant's **Statistics** page.

Automatically making the content channel important

There is a new option called *Automatically make content channel important* on the **Settings > Conferences** page of all MCU models. When enabled, any new content channel (e.g. an endpoint successfully starting to contribute H.239 to a conference) is immediately treated as important by the MCU. This has the same effect as clicking the crown icon for the "Content channel participant" of a conference. Participants who see the content channel within their conference video layout will see it displayed prominently.

An administrator can remove the importance subsequently.

Floor control

The Codian MCU 4200 Series and MCU 4500 Series now support floor control (also known as chair control).

Some H.323 endpoints support a feature known as floor control that is encompassed by the H.243 protocol. Codian's implementation of floor control is designed to work with all H.243-compliant endpoints. (Floor control is not currently supported by SIP.)

The MCU supports the following H.243 features:

- A participant can "take the floor" in a conference. On "taking the floor" their video contribution is sent to all conference participants as a "1 x 1 view":
  - If the active floor participant (temporarily or permanently) has no video channel established to the MCU, then other endpoints will see their "normal" continuous presence view
  - If there is a video channel from the active floor participant, everyone will see that video, and this will override any view family or custom layout setting
- An endpoint can receive the names of the other endpoints in the same conference. Different endpoints act on this in different ways

Every conference supports floor control and the MCU will always advertise the ability to handle H.243 when establishing (and receiving) H.323 connections. Any H.243-capable endpoint can request the floor, and all endpoints (be they chairperson or guest) will be granted it as long as no other endpoint in that conference has already done so. Because only one endpoint can "hold the floor" at a time, it is important that the endpoint "releases the floor" as soon as it no longer requires it.

Floor control has been tested with the following endpoints:

- Tandberg Edge 95
- Tandberg MXP 1000
- Tandberg MXP 1700
- Tandberg MXP 3000
- Tandberg MXP 6000
- Tandberg MXP 990
- Tandberg T150

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Configuring an endpoint's border setting

When configuring an H.323 or SIP endpoint, or calling out to one by clicking **Add participant** from the conference participants page, it is now possible to set the border size in advance. Previously, the border setting could only be applied after a connection had been established (via the **Conference list > Conference > Participant's Display** page) or by the participant themselves using the FECC "Zoom out" menu.

The *View border size* option sets a border thickness to display around the video image. This is useful where the image is displaying off the edges of the participant's screen; using a border to force the image to display properly.

Confirming individual participant disconnections

There is a new option called *Confirm individual participant disconnections* on the **Settings > User Interface** page of all MCU models. When enabled (the default state is disabled), attempting to disconnect a single endpoint connection from a conference's participant list page displays the "Are you sure?" dialog.

Prior to this option being available, only attempts to disconnect *all* conference participants would need confirmation. It remains the case that the all-participant disconnect operation always requires confirmation.

Auto attendant DTMF navigation

To support endpoints that have no FECC capability (for example, many SIP videophones) and to allow them to use the auto attendant menu, it is now possible to use "DTMF navigation mode" while in the auto attendant. This is activated by pressing '#' twice and results in the message "DTMF navigation enabled" appearing briefly at the base of the auto attendant screen. In this mode the 2, 8, 4, and 6 keys can be used in place of the FECC up, down, left, and right operations.

The mode can be exited via pressing '#' twice again.

This option is permanently available (even for endpoints which have FECC capability).

Next and prev links on conference and participant web pages

There are now next and prev (previous) links in a number of web pages that allow you to cycle through the list of conferences or participants for a conference. These links appear at the top right of a page (below the help icon).

Indication of endpoints being muted remotely

The MCU now indicates when the endpoint has been muted remotely. This indication appears in two places:

- On a conference's participant page when *muted remotely* would be displayed in the Rx: row after the audio codec
- On the participant's **Statistics** page in the Receive stream row in the Audio statistics section

Note that not all endpoints indicate that they are muted.

Gatekeeper Ethernet port association moved

Previously, the E*thernet port association* configuration (which determines whether the gatekeeper is consulted for a H.323 call based on whether the call is using Ethernet port A or port B) was on the same row as the *H.323 gatekeeper usage* setting in the **Settings > Gatekeeper** page. It has been moved to its own row for consistency with other options (all of which have their own row) and other Codian products.

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New serial command for resetting the admin password

A new *reset_password* command is available on the serial console across all MCU devices. When this command is used without any parameters, it resets the system-created administrator account back to the user name *admin* and no configured password. When the '-all' parameter is used, all user accounts are reset to have no password.

Gatekeeper neighboring

In situations where more than one gatekeeper is used, gatekeeper neighboring allows devices registered with one gatekeeper to call devices registered to another.

When the built-in gatekeeper receives a request to resolve a number or ID to an IP address that is not currently registered with it, it forwards that request to its neighbor gatekeeper(s). The built-in gatekeeper will then use the information received from the neighbor(s) to reply to the original request.

You can optionally configure the built-in gatekeeper with up to two neighboring gatekeepers (in the web interface, go to **Gatekeeper**). On the same page you can also configure the behavior of the built-in gatekeeper on receipt of requests from another gatekeeper. It can:

- forward requests regarding unknown numbers and IDs to its neighbor(s)
- reply to requests from other gatekeepers

Gatekeeper neighboring has been tested with the following gatekeepers:

- Tandberg Gatekeeper 5.1
- Polycom Pathnav 7.0
- Radvision ECS 4.1
- GNU GK v2.2.5
- Codian MCU v2.1(1) embedded gatekeeper
- Emblaze Vcon MXM 4.51

H.323 Gatekeeper RAI - Resource Availability Indications

When using the MCU in a multi-device ad hoc conferencing environment, the MCUs need to be able to tell the gatekeeper when they are "full" so that it does not route new numbers via the registered prefix to those devices. MCU v2.1 adds support for this RAI (resource availability indication) gatekeeper message, to allow the MCU device(s) to indicate availability or unavailability based on configurable thresholds

The RAI feature involves the following extra configuration items:

- Each MCU device must be explicitly enabled to generate RAI messages on an MCU-wide basis
- An active conferences threshold can be configured: if this threshold is equaled or exceeded, the MCU's RAI state will be "unavailable"
- A video ports threshold can be configured: if this threshold is equaled or exceeded, the MCU's RAI state will be "unavailable". Note that H.239 and streaming connections count towards this limit.

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Upgrading Software

Using a web browser

Note: Trying to load software designed for the MCU 4200 Series on a MCU 4500 series will make the unit inoperable.

1. Unzip the image file.

2. Browse to the current IP address of the MCU using an IE-compatible Web browser. Click **Click here to log in** and then **Change log in**.

3. When prompted, type in **admin** for the user name and its associated password (this is blank in a new unit).

4. Go to the **Home > Settings > Upgrade** page.

5. In the Main software image section, type in, or browse to the location of the software image file.

6. Click the **Upgrade software image** button.

   The Web browser uploads the file to the MCU. This takes some time – dependent on your network connection. Do not move your Web browser away from the Upgrade Software page or refresh this page during the upload process; otherwise, it may abort.

   After a number of minutes, the Web browser refreshes automatically and displays "Main image upload completed". Close this window.

7. Click the **Shutdown button** on the main upgrade page. This option will now change to **Confirm MCU shutdown**. Click to confirm.

8. Click the **Restart MCU and Upgrade** button. This button only appears in the Upgrade page during this process.

   The unit will reboot and upgrade itself – this also takes a number of minutes.

   Note: If you have been logged out due to inactivity, log in again as admin and click **Restart MCU and upgrade** at the bottom of the Upgrade software page to complete the upgrade.

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Using FTP

1. Use an FTP client to connect to the MCU – e.g. **`ftp <MCU IP Address>`** from the command prompt.

2. When prompted type in **`admin`** as the user name and its associated password (this is blank in a new unit).

3. Upload the upgrade file – e.g. **`put codian_mcu_2.1(1.7)`** from the command prompt.

4. When the upload has completed, reboot the MCU to start the upgrade. This can be done using the **Reboot** button on the Upgrade page within the web interface.

Notes

- In general FTP is more reliable than using the web interface for upgrades
- The progress of the upgrade can be monitored through the serial port
- Before upgrading, make sure that the MCU is not in use. Anyone using the MCU at the time of the upgrade may experience poor performance and loss of connectivity
- The time required to download and upgrade depends on the speed of your network connection. With a fast connection the total time to download, upgrade and restart the MCU is several minutes

Checking for Updates and Getting Help

It is a good idea to regularly check for updates of the software image on the Codian web site.

If the documentation does not answer your question or you have a problem with one of our products:

1. Refer to the Technical FAQ section of the Codian web site which is kept up to date with the latest information from our technical support team regarding the resolution of customer issues.
2. Contact your reseller. Our resellers have a wealth of experience with our products and this is often a quick way of solving a problem.
3. If your query remains unsolved, there is a web form in the Support area of the Codian web site that you can complete. Ensure that you provide all the details requested by the form to assist the technical support team in resolving your problem:
   a. The serial number and product model number (for example: MCU 4200) of the unit.
   b. The software build number. (To find this, in the web interface, go to **Status > General**).
   c. Where you purchased the unit.
   d. Your contact email address or telephone number.

Note that you can also send an email to our technical support team at *support@codian.com*

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Resolved Issues

Resolved in version 2.1(1.7), 30 July 2007

Bug ID	Summary
927	Unit freezes until characters entered on serial terminal
3494	No video received from MCU to client VTA running Cisco Call manager 5
3513	Interoperability issue between Eyebeam/X-lite and Codian MCU
3525	Unable to operate certain camera control features on Tandberg endpoints
3545	MCU cannot make calls on port A when registered to MXM Gatekeeper on port B
3552	No video and port allocation exceeded when creating an ad-hoc conference
3558	Unable to drag and drop from MCU web UI endpoints with H.323 names longer than 31 characters
3579	Pane placement crash with 40 conference participants in a 4x5 layout
3581	FTP size command returns incorrect results
3586	Preconfigured participants who cannot be contacted do not get automatically redialled

Versions 2.1(1.4) to 2.1(1.6) not published

Resolved in version 2.1(1.3), 11 July 2007

Bug ID	Summary
3473	Incorrect number of video ports reported in use on MCU 4200
3476	DSP crash on VTA call or incoming call from Codian ISDN Gateway
3487	No video when connecting to MCU Auto Attendant in port reservation mode

Versions 2.1(1.1) and 2.1(1.2) not published

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Outstanding Limitations and Bugs

Issues when removing the CompactFlash™ during operation

Removing the CompactFlash card while the MCU is in operation has been known to cause a crash.

Windows Media Player

Streaming a conference with Windows Media Player in multiple windows or tabs on the same browser will crash the browser. This is a known issue with Windows Media Player. If you need to stream more than one conference simultaneously, use a different player such as QuickTime or Real Player.
In addition, Windows Media Player 11 (WMP11) can display streams incorrectly when used as an embedded player with browsers other than Internet Explorer. This is a known incompatibility. In some cases, setting the video size of the main streaming video window (the Video size field in the Streaming page) to Large will correct the problem. To work around this issue, you can use QuickTime or RealPlayer instead of WMP, or use Internet Explorer instead of your normal browser.

Tandberg MXP990 can stop sending main video when sending H.239

The MXP990 appears to stop sending video when sending H.239 to the Codian MCU. This only appears to occur when the MXP is sending H.264 main video to the Codian MCU. This issue is not new in this release.

Streaming to QuickTime7 causes problems with some browsers

Streaming to an embedded QuickTime player using the QuickTime 7.0 plus later option for the Player format on the MCU can cause certain browsers to crash or remain in the 'negotiating' state indefinitely. Affected browsers include: IE6; Firefox 1.5 (Mac and PC); Safari 2.0.3 and earlier, and Camino. IE7 and Safari 2.0.4 do not appear to be affected by this. Using the QuickTime 6.5 plus later option for the Player format on the MCU will allow streaming to QuickTime using any browser that supports a QuickTime plugin.

Interoperability problems with a VCON HD3000, HD2000 and HD600

No video is received in either direction when connecting to and from the HD3000/HD2000/HD600 running software version 2.6 using H.263+. The Codian MCU will report 100% frame errors. One possible workaround is to go to **Settings > Conferences** and disable H.263+ on the MCU; however, this is a unit-wide setting and therefore may not be appropriate. This problem is being investigated by VCON.

Video issues when Lifesize endpoints change resolution

There is a known bug with the Lifesize endpoints where they show a black "negative-looking" image for ½ second or so every time the endpoint changes transmit resolution. This issue can be partially worked around: on the MCU go to **Settings > Conferences** and untick the Video receive bitrate optimization check box. This significantly reduces the number of circumstances in which the Lifesize will change resolution. Lifesize is investigating this issue.
There is also another known bug with the Lifesize endpoints where they show a black video image for ½ second or so every time the MCU changes the resolution it sends to the Lifesize endpoint. This issue can be partially worked around: on the MCU go to **Settings > Conferences** and set the "Video transmit size optimization" to "None". This significantly reduces the number of circumstances in which the MCU will change resolution. Lifesize is investigating this issue.
Note: these workarounds do have a significant negative impact on the MCU's performance

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